IN THE CLAIMS

Please amend the claims as follows:

Claims 1-5 (Cancelled).

Claim 6 (Currently amended): An ultrasonic sensor ~~characterized by~~ comprising:

a γ-Al_2O_3 single crystal film epitaxially grown on a semiconductor single crystal substrate[[,]];

an epitaxial single crystal electrically conductive thin film disposed on the γ-Al_2O_3 single crystal film[[,]];

a highly oriented ferroelectric thin film disposed on the epitaxial single crystal electrically conductive thin film[[,]]; and

an upper electrode disposed on the ferroelectric thin film[[,]]; wherein

the semiconductor single crystal substrate is subjected to a treatment for adjusting a resonant frequency and an ultrasonic wave is detected.

Claim 7 (Currently amended): The ultrasonic sensor according to Claim 6, ~~characterized in that~~ wherein the semiconductor single crystal substrate has an SOI structure.

Claims 8-11 (Cancelled).

Claim 12 (New): The ultrasonic sensor according to Claim 6, wherein the semiconductor single crystal substrate is a Si single crystal.

Claim 13 (New): The ultrasonic sensor according to Claim 12, wherein the γ-Al_2O_3 single crystal film epitaxially grown on a semiconductor single crystal substrate is grown on a (100) face of the Si single crystal.

Claim 14 (New): The ultrasonic sensor according to Claim 6 wherein the highly oriented ferroelectric thin film disposed on the epitaxial single crystal electrically conductive thin film comprises one selected from the group consisting of $BaMgF_4$, $Bi_4Ti_3O_{12}$, $(Bi,La)_4Ti_3O_{12}$, $BaTiO_3$, $Ba_xSr_{1-x}TiO_3$, $SrBi_2Ta_2O_9$, $PbTiO_3$, $Pb_yLa_{1-y}Zr_xTi_{1-x}O_3$, and ZnO.

Claim 15 (New): The ultrasonic sensor according to Claim 6 wherein the upper electrode disposed on the ferroelectric thin film comprises gold black.